

Topic: Repeating decimals

Question: What's the next digit in 5.6321563215 if this number decimal can be rewritten as $5.\overline{63215}$?

Answer choices:

- A 3
- B 6
- C 5
- D 1



Solution: B

The bar over the 63215 indicates that this part of the number is repeating, which means the number could be written as

$$5.63215632156321563215\dots$$

Therefore, the next digit (the digit that comes immediately after 5.6321563215) is a 6.



Topic: Repeating decimals**Question:** Rewrite the repeating decimal.

0.083333...

Answer choices:

- A $0.08\overline{3}$
- B $0.0\overline{83}$
- C $0.083\overline{3}$
- D 0.08



Solution: A

Once we get to the 3 immediately following the 8 in

0.083333...

the number 3 repeats forever, which means we can collapse all the 3's into a single 3 with a bar over it.

0.08 $\overline{3}$



Topic: Repeating decimals**Question:** Rewrite the repeating decimal. $232.3232323\dots$ **Answer choices:**

- A 232.33
- B $232.\overline{32}$
- C $232.3\overline{23}$
- D $232.\overline{3}$



Solution: B

Considering all the numbers after the decimal point of

$$232.3232323\dots$$

we have an indefinitely repeating 32. Which means we need to collapse all the repeating 32s and put a line over the first 32.

$$232.\overline{32}$$

